

**Wireless information meter****FIELD OF THE INVENTION**

1           The present invention is the first meter made that can be mounted on an  
engine or motor and be able to pick up signal with out the use of any wires to  
receive the data and then display it or store the date in memory for recall. All  
other meter require lead wire to be connected to the meter, but Paul's Wireless  
5           information meter does not require any wires at all, it is wireless.

Mr. Paul Crunk conceived the idea of having a wireless meter late 1997  
that would keep track of service hours, the RPM and any other data required by  
the end user or manufacturer of a product.  
10          Mr. Crunk has been working on this project since then and has finally come up  
with fully working meter as of August 31, 2001

**Background of the invention:** A wireless information meter they could  
be used on gasoline, diesel, electric motors or any electrical application to  
15          record data of hours or use, RPM or any other data required, which can be used  
by the end user or the manufacturer of that product to be able to keep track of  
the running operation of any gasoline or electrical product in more detail.

This wireless service meter could just keep track of rpm and hours or  
just keep track of service hours depending on which model a customer required  
20          and features needed for the application of use. The applications of use are  
endless. Some of the applications of use are furnaces, air-conditioners, water  
pumps, compressors, electrical usage on equipment, hours the equipment is  
being used and service alarms that alert the users of the equipment that  
service time and 1 or more service timers, plus eight rpm feature which can  
25          operate off of inductive pickup or be able to receive a pulse signal through a  
standard electrical wire. This service timers on the wireless meter could also be  
activated by receiving energy being produced by most standard electrical  
devices being used on 110 volts through 240 volts D.C. or AC power. At this

1 present time in the electrical market on many pieces of equipment including  
motors air-conditioners furnaces and many heating and cooling equipment there  
is no such recording device attached to the product. Many have said that is  
hard to do service on bearings or customers being able to set up some type of  
5 service interval to be able to apply lubrication or grease to bearings on many  
electrical equipment applications. They also have mentioned they would like  
to have a way of knowing how many hours and at what rpm the motor was  
operated at and be able to get this information from the meter and download  
into a laptop computer directly at the site or via telecommunications equipment  
10 by a person from a remote location tracking many pieces of equipment  
nationwide or international.

Paul Crunk has been working on this project for the last 5 years and  
now has invented Wireless information meter. The meter is able to receive a  
15 pulse signals , inductive signals or RF via the air or through a metal structure or  
electrical non engine wire application to where the meter is mounted thereto.  
The meter does not have to be mounted in the area of the engine or electrical to  
be able to operate. The meter can be able to display hours or RPM.  
The meter can use a digital or analogue display. The meter can be set up  
20 to be able to store all data for recall at a later date and then read through a  
portable PC, hand held reader, palm pilot or direct from the meter digital  
display. The meter is able to have an internal or external antenna Drawing 1  
#1, #2, #3 on the exterior of the meter. The external antenna can at times make  
direct contact with the metal structure for better reception of the signal of that  
25 engine only and No false signals from other engines nearby.

Paul's wireless meter is the first of its kind, because all other meters  
require some sort of wire or cable to bring the information or signal to the  
meter. Also the other meters need to be within 2-6 inches of the spark plug and  
30 the wire must be attached to the meter out case in some way and the other end

1 must be attached to a spark plug wire so it can operate and display the  
information to the user. Most users would like the meter placed a distance from  
the source and not require any sort of wires needing to be attached to a spark  
5 plug wire, spark plug, engine kill wire, engine ignition system or an electrical  
AC wire source for it to be able to operate the meter.

Paul's wireless meter can be placed over 3 inches to over 6 feet away  
form the source the engine or motor and is able to receive the signal from the  
engine to the point of where the meter is mounted.

10 Some week signal engines will require a lead wire from the spark plug wire to  
be connected to a metal structure frame to help transfer the signal into the  
equipment being used.

**DESCRIPTION OF DRAWINGS**

15 The meter can be mounted on a metal bracket Drawing 2 #10 or on a  
plastic bracket with a antenna built into or on the plastic bracket.  
Problems with wireless has been that when water makes direct contact with the  
external antenna or the meter, the meter hour meter will keep running. I also  
20 have found that by mounting the meter into a special designed plastic bracket  
and at the proper distance and antenna at a certain length and running it a  
certain angle and at proper distance from the metal surface adding filters etc to  
meter it was able to receive and record the data in the meter accurately at over 6  
feet away See Drawing 3 #10 and #11

**DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT**

25 I have done a patent search on the web and do not find any wireless  
tachometers or service meters that can be attached to equipment etc that does  
not require wires to be attached to the meter in some way.

30 My wireless meters does not require ANY wires to power it or make it